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ABSTRACT

A study was conducted at Sacramento City College (SCC) to determine the effects of enrolling in a first-semester student success course on academic performance and persistence. Matched pairs of students, one who took the semester-long success course and one who did not, were compared in terms of number of college credit hours completed, grade point average (GPA), and dropout rate. Only students who met the following criteria were included in the selection pools used for matching: had completed no college work previously, had completed the assessment process, participated in the standard matriculation process, and were officially enrolled at the beginning of the fourth week of classes. From two equal-sized pools, totaling over 250 students, 40 pairs of students were randomly matched on reading level, writing level, highest math course completed, and number of hours employed. The student success course addressed study skills, life skills, introduction to career planning, and orientation to college. Over the seven semesters of the study, the dropout rate of the treatment group half that of the control group. Students in the treatment group earned a grade of C or better in four times as many math courses, three times as many writing courses, and almost twice as many reading courses as the control group. When the total number of college credits earned was examined, the treatment group completed 326% more units than the control group. After seven semesters, the GPA's of the two groups were almost identical. A position paper, "Making the Case for Student Success Courses: The Importance of Front Loading the Learning Experience," is attached. (ECC)

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ED 364 300

# AN EVALUATION OF THE SHORT TERM AND LONG TERM IMPACT A STUDENT SUCCESS COURSE HAS ON ACADEMIC PERFORMANCE AND PERSISTENCE

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JULY 1993

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This study was an attempt to determine if there is any evidence that enrollment in a student success course the first semester has an impact on academic performance and persistence. First-time college students who enrolled in a three-semester-unit student success course were randomly matched to other first-time college students who did not take the course. The data was examined at two time intervals; after one semester and again after seven semesters.

The study was conducted at Sacramento City College, an inner city community college with more than 17,000 students. Over 50% of the students at SCC are ethnic minorities.

## Basic Assumptions

The basic assumption of this study was that students who enroll in a specially designed student success course will show improved academic performance as measured by such standard measures of academic success as 1) units of credit completed, 2) grade point average, and 3) lower drop-out rate.

## Hypothesis

The null-hypothesis was that when comparing standard measures of academic performance and persistence, there will be no difference between the performance of two matched groups of students, when only one group enrolls in a semester-long student success course.

## Study Design

A quasi-experimental, treatment/no treatment research design was used in this study. Matched pairs of students were used to improve the internal validity . The factors chosen for matching were judged to be the best predictors of academic success available at this institution. The dependent variables were: (1) number of college credit hours completed, (2) grade point average, and (3) drop-out rate. The independent variable was the treatment course.

## Methodology

Only students who met the following criteria were included in the two selection pools used for matching:

(1) had completed no college work previously
(2) had completed the assessment process
(3) participated in a standard matriculation process
(4) were officially enrolled at the beginning of the fourth week of instruction. (No official records on enrollment are kept until that time.)

From these two equal-size pools, totaling over 250 students, forty pairs of students were randomly matched on 1) reading level, 2) writing level, 3) highest math course completed, and 4) number of hours working while going to school. All students completed the same matriculation-intake process the semester the study was initiated. As far as could be determined, these two matched groups had equal academic potential. The only observable difference was the treatment group voluntarily enrolled in the student success course.

The initial comparison of these two matched groups was made at the end of the first semester. The second comparison was made at the end of seven semesters. At both intervals the statistical analysis involved a group-by-group comparison of the following factors: 1) units of college credit earned 2) grade-point average and, 3) drop-out rate.

Description of the treatment course

The treatment course was a three-semester-unit, graded class taught over 18 weeks by six different teachers. Students were encouraged to develop independent learning skills, using a variety of ideas, strategies and techniques. The 54-hours of instruction addressed the following four areas: 1) study skills, 2) life skills, 3) introduction to career planning, and 4) orientation to college.

Limitations of the Study

Any study that includes students who self-select into the treatment process has a built-in bias. This researcher acknowledges the self-selection bias as one of the limitations of this study.

The following steps were taken to identify and control the variables in this study:

1) A quasi-experimental, treatment/ no treatment research design was used.
2) Individual students in these two groups were randomly matched in an attempt to strengthen the internal validity of the study.
3) The criteria used to match the two groups was selected by an independent panel and was judged to be the best predictors of academic success available at our school.
4) These same four factors provide some internal control over the dependent variables.
5) The dependent variables were: a) number of units completed, b) grade point average c) drop-out rate.
6) The independent variable was the treatment course.

Instructor bias was not considered to be a factor, since the treatment course was taught by six different instructors.

## *RESULTS AFTER ONE SEMESTER*

*The following chart shows the comparison of the performance of these two groups after one semester.*

| | | N | Dropped out/ Completed | x | s | p* | zc = -1.65 at 5% level 1 tailed test | Z score |
|---|---|---|---|---|---|---|---|---|
| Units completed | Treatment Group | 30 | | 7.85 | 12.778 | | 1.65 | 2.03 |
| | Control Group | 22 | | 5.86 | 11.742 | | | |
| GPA | Treatment Group | 30 | | 2.62 | 1.176 | | 1.65 | 0.10 |
| | Control Group | 22 | | 2.59 | 1.282 | | | |
| Dropout Rate | Treatment Group | | 10 30 | | | 0.25 | -1.65 | -1.92 |
| | Control Group | | 18 22 | | | 0.45 | | |

This chart shows that after one semester the treatment group outperformed the control group on all three measures of academic achievement and persistence. These differences were at the 5% significance level when comparing units completed and drop-out reate. The difference in GPA was **not** statistically significant. Based on these findings, the null hypothesis was rejected.

## *RESULTS AFTER ONE SEMESTER*

*The following chart shows the statistical comparison of the performance of these same two groups after seven semesters.*

| | | N | Mean | SD | t-value | signif (2-tail) |
|---|---|---|---|---|---|---|
| Units Completed | Treatment Group | 33 | 29.59 | 25.56 | 3.47 | .01 |
| | Control Group | 26 | 12.29 | 11.51 | | |
| GPA | Treatment Group | 33 | 2.56 | 1.03 | .05 | no difference |
| | Control Group | 26 | 2.57 | 1.07 | | |

| | | Dropped Out/ Preparing N | zc = -1.65 at 5% level 1 tailed test | Z |
|---|---|---|---|---|
| Dropout Rate | Treatment Group | 7/40 | -1.65 | -1.78 |
| | Control Group | 14/40 | | |

Conclusions

After seven semester, the findings were that students who enrolled in the treatment course their first semester outperformed students from the control group in two of the three areas of comparison. Using the given data, there is sufficient evidence to conclude that the treatment course had a positive impact on:

1. the number of units of college credit completed. This difference was significant at the 1% level.

2. the drop out rate. The difference was significant at the 5% level.

There was no significant difference in the grade point average of the two groups.

Based on these findings, the null hypothesis was rejected.

Discussion of the longitudinal study

Over the seven semesters of this study the dropout rate of the treatment group was much lower than the control group. For the purpose of this study, the term "dropout" refers to students from either group who earned no units of college credit the first semester and who also earned no units of college credit during the remaining six semesters of this study at any of the three local community colleges. Based on this definition, only half as many students from the treatment group dropped out the first semester, never to return during the remaining six semesters of this study.

In a broader sense, lack of success the first semester seems to have a long term impact on all new students. Seventy percent of the treatment group dropouts and seventy-five percent of the control group dropouts never returned over the remaining six semesters of this study.

Another important finding was the major difference found in the number of academic skill courses completed. Students from the treatment group earned a grade of "C" or better in four times as many math courses, three times as many writing courses, and almost tw times as many reading courses as the control group.

When the total amount of college credit earned was examined, the treatment group completed 326% as many units of college credit as the control group. It is likely that one or more of the following factors contributed to this outcome: 1) fewer students in the treatment group dropped out, 2) each semester the treatment group completed more units of credit per student enrolled, and 3) over the length of the study the treatment group enrolled more frequently.

After seven semesters the GPA of the two groups was almost identical. This occurred in spite of the fact that it is likely that fewer high risk students from the treatment group dropped out. If this is so, the academic performance of at-risk students from the treatment group did not diminish the overall performance of that group. A third factor to be considered is that the treatment group's GPA was almost identical even though they completed 326% as many units as the control group.

Care should be taken in generalizing these findings since this study examined the performance of only 80 students who all began college the same semester. However, the general results of this study are consistent with the emerging research on the outcomes associated with enrollment in student success courses.

Care should be taken in generalizing these findings since this study examined the performance of only 80 students who all began college the same semester. However, the general results of this study are consistent with the emerging research on the outcomes associated with enrollment in student success courses.

## IMPLICATIONS

Who has the primary responsibility for learning? Students do. Linked with this responsibility is their right to succeed. But, before many can claim this right, they need help in developing their full learning potential.

These findings are of particular importance to colleges who are seeking cost-effective ways to improve the academic performance and persistence of their students. The results of this study are consistent with the emerging research in this area and clearly support the notion that a three-semester-unit student success course taken during the first semester can have a positive, long-term impact on academic performance and persistence.

Additional studies which replicate this research should be conducted. In addition, other related questions should be examined such as:

1) What is the impact that lack of success the first semester has on student persistence?
2) What evidence is there to support the idea that students who enroll in the treatment group seek out and complete more academic skill classes than those in the control group?
3) Is there any evidence to support the idea that enrolling in a student success course enhances the development of the student's internal locus of control?

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Appendix

A Position Paper On

# MAKING THE CASE FOR STUDENT SUCCESS COURSES : THE IMPORTANCE OF FRONT LOADING THE LEARNING EXPERIENCE

By

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Originally titled
Making The Case for Extended Orientation

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Most new students find college unlike any previous learning experience. Although virtually all of them begin with high hopes, few are fully prepared to get the most out of their first term. Even among the academically well-prepared, many are overwhelmed by the array of career choices to be considered and the many decisions to be made. Students with poor study habits abound among those who did well in high school. Many non-traditional students struggle with rusty or inadequate academic skills and the complexities of juggling school, job, and family. Still others have low self-esteem, ambivalent feelings toward formal learning, or a genuine scarcity of positive learning experiences. However, one thing is certain; in spite of the ambivalent feelings of some, no one comes to college expecting to experience the pain and frustration of failure. The purpose of this paper is to make others aware of the power and importance of the student success course concept by stating its value to the individual learner.

The urgent need to increase the involvement and achievement of students from culturally different background adds to the challenge of facilitating learning in open-door institutions. The majority of first-time students no longer come directly from high school with a college-prep background. The students of the 80's bring with them a broad range of cultural attributes, educational skills, life experiences, expectations, hopes, and age. Thus, all institutions of higher education, especially those with open-door admission policies, must recognize that many of their students will have difficulty achieving their educational potential without an effective early intervention. Knowing this, the importance of offering a semester-long student success course, targeted to a broad cross-section of students becomes critical.

The idea of offering a student success or

orientation-type course is not a new one. Boston University first offered such a course in 1888. Northern Iowa State University had an orientation course before 1890. The first orientation course offered for academic credit was at Reed College in Portland, Oregon in 1911. The number of institutions offering an extended orientation-type course gradually increased over the years. There was a surge of interest immediately after World War II. With the student success course concept not fully developed, many institutions, failing to assess its' importance for the general student body, shifted their focus toward providing support for high risk students. In the 1970's, as enrollments plateaued and began to decline, retention became the new buzz word in higher education. This created a renewed interest in extended orientation concept, or the late 1980's version which is referred to as a student success course. The institutional interest in offering such a course has developed rapidly over the last six years. Now, according to the American Council on Education's 1984 Campus Trend survey, more than two-thirds of the nations' 3,300 post secondary education institutions have courses generally described as "coping with college".

Student success courses can be discribed as structured, student-centered learning experiences that last the entire first term. They provide first-time college students with critical information and skill-building experiences in a positive learning environment. Most institutions offer the course for credit. This is an important institutional statement that helps convey to all the value and importance the institution places on this course. While there is not a clear consensus on whether the course should be graded pass/fail or by letter grade, the majority of colleges offer it as an elective, rather than a required course. There is general recognition that the timely introduction of information, ideas, strategies and

techniques that support student success is of critical importance and can best be accomplished in a course that lasts the entire first term, rather than in a concentrated format immediately before registration or during the first week of the term.

A student success course covers more than just information and skill-building. There is a growing awareness among educators that, through an empowerment process, students can become more aware of, more responsible for, and more involved with their education than others not taking such a course. An example of how this can be accomplished, is to challenge students to view their commitment to education from a consumer's perspective. When consumer concepts such as quality, quantity, costs and personal responsibility are discussed, the relationship between total costs and value received is established. In terms of both time and money, the direct and indirect costs of earning an education are fix costs that remain relatively constant regardless of the quality or quantity of college work completed. For students who begin the term with 15 credit hours, the actual cost of completing 6 credit hours with a grade of "C" is about the same as the cost of completing all 15 with a grade of "A". Becoming aware of this has a profound effect on students as they begin to realize that, although they would not accept less than full value for their time and money in the marketplace, they often delight in "getting away with" doing less than their best in school and are thus assured of receiving less than the highest quality and/or quantity of education for the time and dollars invested. This new consumer awareness can have a profound effect on student performance. As they become pro-active educational consumers, attitudes toward learning begin to shift from "What do I have to do to pass this course?" to "What can I do to get the most out of my education?" This realization results in students' becoming

involved in a term-long process of assessing and broadening their interests, experiences, skills and abilities. In a carefully structured student success courses course, students first learn skills and techniques. Then, they practice using them over an entire term. By receiving weekly written and verbal feedback from their peers, they experience the value of sharing with and learning from classmates. As they acquire more information about themselves and their educational options, they are given assignments which require the use of this newly acquired knowledge or skill. Thus, for example, the process of decision-making and goal-setting, which is introduced early in the term, is practiced and reinforced throughout the term. The repetitious use of this skill contributes to the development of a sense of appreciation for education as an important and worthwhile experience.

For many, a student success ccurse is much more than a sum total of all the parts. It develops its' own synergistic value that enables students to perceive more options and achieve more personal goals. A learning experience presented in this manner, teaches more than the knowledge and skills needed to become successful students. It increases the students' awareness of the power they have over their own lives. Emphasizing their responsibility for learning demonstrates to the learner that no one has more control over input or a greater vested interest in the outcome of their learning experience than the individual learner.

Because of the complexities of controlling all the intervening variables, it is difficult, if not impossible, to establish a direct cause-and-effect relationship for any educational intervention. However, a growing body of research points to student success courses as a powerful tool in supporting student success. Researchers, such as

Fidler at the University of South Carolina; DeFrain at Central Missouri; and Belcher at Miami-Dade have observed positive differences in the performance and/or persistence of students who have taken an student success course. A dozen other studies have been conducted during the last five years at colleges and universities of various types and geographic locations. No two studies used the exact same research approach. However, all of the studies report positive results for students taking student success courses. In summary, the research clearly indicates, when comparing the performance and/or persistence of similar groups of students, those who take a student success courses-type course, as a group, exhibit one or more of the following measurable characteristics:

(1) completion of more units of college credit
(2) a higher GPA
(3) a higher rate of persistence

Student success courses offer something of value for all students. Because of the diversity found within their student populations, a number of colleges have designed student success courses to meet the unique needs of special groups of students. Specially designed student success courses have been offered for such diverse, homogeneous groups as honor students, physically handicapped, athletes, and students who are under represented in higher education.

The potential benefits of a student success course course has little to do with the academic ability or the achievement level previously exhibited by the learner. Rather, the primary goal is for students to realize that they can direct and shape events in their lives. Making students aware of the time and effort needed to achieve appropriate, but challenging educational objectives, is one important step. Having them make a personal commitment to earning a quality education is another. When integrated

into a course that includes (1) study skills,(2) life skills,(3) an introduction to career planning, and (4) an increased understanding of options available in higher education, this "empowerment" process enables learners to perceive, create and act on new options in their lives. The ultimate goal of student success courses is to help students become independent learners. Thus, as they learn to apply time management concepts, decision-making skills, and active learning techniques, newly "empowered" students begin to change daydreams and fleeting fantasies into realistic plans for reaching their goals.

The importance of the empowering process should not be taken lightly. New students find college very different from their previous learning experiences. Consequently, many fail to develop and realize their full potential. While excited about the promise of a new beginning, they find the allure and mystique of college both confusing and frustrating; freedom and flexibility are accompanied by increased responsibility and accountability. Whether students are over-committed, underprepared, undecided about a major, or just naive about the demands of higher education --- whatever the reason---the fact remains that far too many capable students become frustrated, disillusioned, or distracted and leave school. Often, in their haste, they commit "academic suicide" by not following the formal procedure for leaving school. With their dreams shattered, they mistakenly feel they neither belong, nor have the ability to succeed in college--and they have a transcript to prove it! Others stumble blindly through their first year unsure of their educational goals or their purpose for being there.

The demands facing new college students can be compared to those athletes face. To be competitive, an athlete needs to know the rules and strategies of the game;

to have the skills and self-discipline needed for success; and to have good coaching. The students of the 80's, with their broad range of cultural attributes, educational skills, life experiences, expectations, hopes and age need good academic coaching. During their first term every new student in higher education should be informed about and have the opportunity to enroll in a class in which they can learn the rules, develop the strategies, build the skills, create the options, and practice the self-discipline needed to maximize their chances of achieving their full academic potential. When we fail to address these needs the result is a dramatically bloated drop-out rate. Education has long recognized that lack of student readiness and the complexities of the transition to college are major factors in students dropping out of college. The 1987 drop-out statistics published by the National Center for the Advancement of Educational Practices indicate an appalling national drop-out rate among first-year students at open-door institutions of over 47%. However, as mentioned earlier in this paper, there is growing evidence that front-loading the learning experience with a student success course is one efficient and cost-effective way of improving academic success and persistence. Some say that dropping out of college is, after all, the students' choice. Obviously, college is not the answer for all students. However, the question should be asked,"Is dropping out of college really a choice for those who are unaware of their potential, unaware of the learning options available, and unaware or unequipped with the study and life skills needed to support success in college?" Without the initial support they need, it is little wonder that so many students drop out! Student success courses address the notion that students have a right to succeed by providing them with timely information and skill-building while challenging them to be all that they can be. Every student should be informed about the value and importance of taking a student

success course and be encouraged to enroll in one during their first term.